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CLAIM AMENDMENTS

1. (currently amended) A multimode wireless communication device comprises:

digital baseband processing module operably coupled to convert outbound data into outbound digital baseband signals and to convert inbound digital baseband signals into inbound data;

analog to digital converter module operably coupled to convert inbound analog baseband signals into the inbound digital baseband signals;

digital to analog converter module operably coupled to convert the outbound digital baseband signals into outbound analog baseband signals;

first radio section operably coupled to convert the outbound analog baseband signals into first outbound radio frequency (RF) signals and to convert first inbound RF signals into the inbound analog baseband signals when the wireless communication device is in a first mode of operation; ~~and~~

a second radio section operably coupled to convert the outbound analog baseband signals into second outbound RF signals and to convert second inbound RF signals into the inbound analog baseband signals when the wireless communication device is in a second mode of operation; and

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a diversity antenna arrangement, that includes a first antenna, a second antenna, a first diplexer coupled to the first antenna, and a second diplexer coupled to the second antenna, that selectively couples the first radio section to one of the first antenna and the second antenna, and that selectively couples the second radio section to one of the first antenna and the second antenna.

2. (currently amended) The multimode wireless communication device of claim 1 further comprises:

~~a first antenna;~~

~~a second antenna;~~

~~a first diplexer operably coupled to the first antenna;~~

~~a second diplexer operably coupled to the second antenna;~~

a first transmit/receive (T/R) switch operably coupled to the first and second diplexers and to the first radio section, wherein, when the wireless communication device is in the first mode of operation, the first T/R switch provides the first inbound RF signals from a first selected antenna of the first and second antennas to the first radio section and provides the first outbound RF signals from the first radio section to the first selected antenna; and

a second T/R switch operably coupled to the first and second diplexers and to the second radio section, wherein, when the wireless communication device is in the second mode of operation, the second T/R switch provides the

second inbound RF signals from a second selected antenna of the first and second antennas to the second radio section and provides the second outbound RF signals from the second radio section to the second selected antenna.

3. (original) The multimode wireless communication device of claim 1, wherein the digital baseband processing module further functions to convert the outbound data into the outbound digital baseband signals and to convert the inbound digital baseband signals into the inbound data processes the inbound and outbound data in accordance with at least one of IEEE 802.11a, IEEE 802.11b, and IEEE 802.11g.

4. (original) The multimode wireless communication device of claim 1 further comprises:

the analog to digital converter module, the digital to analog converter module, and the digital baseband processing module being in a first integrated circuit;

the first radio section being in a second integrated circuit; and

the second radio section being in a third integrated circuit.

5. (original) The multimode wireless communication device of claim 4, wherein the first integrated circuit further comprises:

a control interface operably coupled to the second and third integrated circuits, wherein the control interface carries control signals to include the first or second mode of operation.

6. (original) The multimode wireless communication device of claim 5, wherein the control interface comprises: a 4-wire Joint Test Action Group (JTAG) interface.

7. (original) The multimode wireless communication device of claim 4, wherein the first integrated circuit comprises:

first analog to digital integrated circuit pins coupled to the first radio section;

second analog to digital integrated circuit pins coupled to the second radio section, wherein the first analog to digital integrated circuit pins are operably coupled to the second analog to digital integrated circuit pins;

first digital to analog integrated circuit pins coupled to the first radio section; and

second digital to analog integrated circuit pins coupled to the second radio section, wherein the second digital to analog integrated circuit pins are operably coupled to the first digital to analog integrated circuit pins.

8. (original) The multimode wireless communication device of claim 4, wherein the first integrated circuit comprises:

analog to digital integrated circuit pins coupled to the first and second radio sections; and

digital to analog integrated circuit pins coupled to the first and second radio sections.

9. (original) The multimode wireless communication device of claim 1 comprises:

the analog to digital converter module, the digital to analog converter module, the digital baseband processing module, and the first radio section being in a first integrated circuit; and

the second radio section being in a second integrated circuit.

10. (original) The multimode wireless communication device of claim 9 wherein the first integrated circuit further comprises:

a control interface operably coupled to the second integrated circuit, wherein the control interface carries control signals to include the first or second mode of operation.

11. (original) The multimode wireless communication device of claim 10, wherein the control interface comprises: a 4-wire Joint Test Action Group (JTAG) interface.

12. (original) The multimode wireless communication device of claim 1 further comprises:

the analog to digital converter including an in-phase analog to digital converter and a quadrature analog to digital converter; and

the digital to analog converter including an in-phase digital to analog converter and a quadrature digital to analog converter.

13. (original) The multimode wireless communication device of claim 1 further comprises:

the analog to digital converter converting in-phase inbound analog signals into in-phase inbound digital signals and converting quadrature inbound analog signals into quadrature inbound digital signals using alternating two-times oversampling; and

the digital to analog converter converting in-phase outbound digital signals into in-phase outbound analog signals and converting quadrature outbound digital signals into quadrature outbound analog signals using the alternating two-times oversampling.

14. (original) The multimode wireless communication device of claim 1, wherein the digital baseband processing module comprises:

a first physical layer corresponding to the first mode of operation and to a third mode of operation;

a second physical layer corresponding to the second mode of operation;

physical layer coupling module operably coupled to the first and second physical layers to facilitate the third mode of operation; and

a Media-specific Access Control protocol (MAC) layer operably coupled to first physical layer, the second physical layer and to the physically layer coupling module to facilitate the first, second, and third modes of operation.

15. (currently amended) A multimode wireless communication device comprises:

a first integrated circuit that includes:

digital baseband processing module operably coupled to convert outbound data into outbound digital baseband signals and to convert inbound digital baseband signals into inbound data, wherein the digital baseband processing module includes:

a first physical layer corresponding to the first mode of operation and to a third mode of operation;

a second physical layer corresponding to the second mode of operation;

physical layer coupling module operably coupled to the first and second physical layers to facilitate the third mode of operation;

analog to digital converter module operably coupled to convert inbound analog baseband signals into the inbound digital baseband signals;

digital to analog converter module operably coupled to convert the outbound digital baseband signals into outbound analog baseband signals; and

first radio section operably coupled to convert the outbound analog baseband signals into first outbound

radio frequency (RF) signals and to convert first inbound RF signals into the inbound analog baseband signals when the wireless communication device is in a first mode of operation; and

a second integrated circuit that includes a second radio section operably coupled to convert the outbound analog baseband signals into second outbound RF signals and to convert second inbound RF signals into the inbound analog baseband signals when the wireless communication device is in a second mode of operation.

16. (original) The multimode wireless communication device of claim 15 further comprises:

a first antenna;

a second antenna;

a first diplexer operably coupled to the first antenna;

a second diplexer operably coupled to the second antenna;

a first transmit/receive (T/R) switch operably coupled to the first and second diplexers and to the first radio section, wherein, when the wireless communication device is in the first mode of operation, the first T/R switch provides the first inbound RF signals from a first selected antenna of the first and second antennas to the first radio section and provides the first outbound RF signals from the first radio section to the first selected antenna; and

a second T/R switch operably coupled to the first and second diplexers and to the second radio section, wherein, when the wireless communication device is in the second mode of operation, the second T/R switch provides the second inbound RF signals from a second selected antenna of the first and second antennas to the second radio section and provides the second outbound RF signals from the second radio section to the second selected antenna.

17. (original) The multimode wireless communication device of claim 15, wherein the first integrated circuit further comprises:

a control interface operably coupled to the second integrated circuit, wherein the control interface carries control signals to include the first or second mode of operation.

18. (original) The multimode wireless communication device of claim 15 further comprises:

the analog to digital converter including an in-phase analog to digital converter and a quadrature analog to digital converter; and

the digital to analog converter including an in-phase digital to analog converter and a quadrature digital to analog converter.

19. (original) The multimode wireless communication device of claim 15 further comprises:

the analog to digital converter converting in-phase inbound analog signals into in-phase inbound digital signals and converting quadrature inbound analog signals into quadrature inbound digital signals using alternating two-times oversampling; and

the digital to analog converter converting in-phase outbound digital signals into in-phase outbound analog signals and converting quadrature outbound digital signals into quadrature outbound analog signals using the alternating two-times oversampling.

20. (currently amended) The multimode wireless communication device of claim 15, wherein the digital baseband processing module further includes~~comprises~~:

~~a first physical layer corresponding to the first mode of operation and to a third mode of operation;~~

~~a second physical layer corresponding to the second mode of operation;~~

~~physical layer coupling module operably coupled to the first and second physical layers to facilitate the third mode of operation; and~~

a Media-specific Access Control-protocol (MAC) layer operably coupled to first physical layer, the second physical layer and to the physically layer coupling module to facilitate the first, second, and third modes of operation.

21. (currently amended) A multimode wireless communication device comprises:

a first integrated circuit that includes:

digital baseband processing module operably coupled to convert outbound data into outbound digital baseband signals and to convert inbound digital baseband signals into inbound data;

analog to digital converter module operably coupled to convert inbound analog baseband signals into the inbound digital baseband signals;

digital to analog converter module operably coupled to convert the outbound digital baseband signals into outbound analog baseband signals;

a second integrated circuit that includes a first radio section operably coupled to convert the outbound analog baseband signals into first outbound radio frequency (RF) signals and to convert first inbound RF signals into the inbound analog baseband signals when the wireless communication device is in a first mode of operation; and

a third integrated circuit that includes a second radio section operably coupled to convert the outbound analog baseband signals into second outbound RF signals and to convert second inbound RF signals into the inbound analog baseband signals when the wireless communication device is in a second mode of operation; and

a diversity antenna arrangement, that includes a first antenna, a second antenna, a first diplexer coupled to the first antenna, and a second diplexer coupled to the second antenna, that selectively couples the first radio section to one of the first antenna and the second antenna, and that selectively couples the second radio section to one of the first antenna and the second antenna.

22. (currently amended) The multimode wireless communication device of claim 21 further comprises:

~~a first antenna;~~

~~a second antenna;~~

~~a first diplexer operably coupled to the first antenna;~~

~~a second diplexer operably coupled to the second antenna;~~

a first transmit/receive (T/R) switch operably coupled to the first and second diplexers and to the first radio section, wherein, when the wireless communication device is in the first mode of operation, the first T/R switch provides the first inbound RF signals from a first selected antenna of the first and second antennas to the first radio section and provides the first outbound RF signals from the first radio section to the first selected antenna; and

a second T/R switch operably coupled to the first and second diplexers and to the second radio section, wherein, when the wireless communication device is in the second

mode of operation, the second T/R switch provides the second inbound RF signals from a second selected antenna of the first and second antennas to the second radio section and provides the second outbound RF signals from the second radio section to the second selected antenna.

23. (original) The multimode wireless communication device of claim 21, wherein the first integrated circuit further comprises:

a control interface operably coupled to the second and third integrated circuits, wherein the control interface carries control signals to include the first or second mode of operation.

24. (original) The multimode wireless communication device of claim 21, wherein the first integrated circuit comprises:

first analog to digital integrated circuit pins coupled to the first radio section;

second analog to digital integrated circuit pins coupled to the second radio section, wherein the first analog to digital integrated circuit pins are operably coupled to the second analog to digital integrated circuit pins;

first digital to analog integrated circuit pins coupled to the first radio section; and

second digital to analog integrated circuit pins coupled to the second radio section, wherein the second digital to

analog integrated circuit pins are operably coupled to the first digital to analog integrated circuit pins.

25. (original) The multimode wireless communication device of claim 21, wherein the first integrated circuit comprises:

analog to digital integrated circuit pins coupled to the first and second radio sections; and

digital to analog integrated circuit pins coupled to the first and second radio sections.

26. (original) The multimode wireless communication device of claim 21 further comprises:

the analog to digital converter including an in-phase analog to digital converter and a quadrature analog to digital converter; and

the digital to analog converter including an in-phase digital to analog converter and a quadrature digital to analog converter.

27. (original) The multimode wireless communication device of claim 21 further comprises:

the analog to digital converter converting in-phase inbound analog signals into in-phase inbound digital signals and converting quadrature inbound analog signals into quadrature inbound digital signals using alternating two-times oversampling; and

the digital to analog converter converting in-phase outbound digital signals into in-phase outbound analog signals and converting quadrature outbound digital signals into quadrature outbound analog signals using the alternating two-times oversampling.

28. (original) The multimode wireless communication device of claim 21, wherein the digital baseband processing module comprises:

a first physical layer corresponding to the first mode of operation and to a third mode of operation;

a second physical layer corresponding to the second mode of operation;

physical layer coupling module operably coupled to the first and second physical layers to facilitate the third mode of operation; and

a Media-specific Access Control-protocol (MAC) layer operably coupled to first physical layer, the second physical layer and to the physically layer coupling module to facilitate the first, second, and third modes of operation.